VERSION OF CLAIMS 1-12 INCLUDING REFERENCE NUMERALS

1. An electric-component mounting system comprising:

a component-holding device (140; 460) arranged to hold an electric component (28; 431);

a board-supporting device (40) arranged to support a printed-wiring board (38; 416) on which the electric component is mounted;

a first relative-movement device (44, 142; 469) operable to move said component-holding device and said board-supporting device relative to each other in a first direction parallel to a surface (64; 471) of the printed-wiring board supported by the board-supporting device;

a second relative-movement device (280; 466) operable to move said component-holding device and said board-supporting device relative to each other in a second direction which intersects said surface of the printed-wiring board supported by the board-supporting device; and

a control device (300; 500) including a positioning portion operable to select one of a plurality of different control targets which is used for said first relative-movement device to establish a predetermined relative position between said component-holding device and said board-supporting device, said positioning portion selecting said one of said plurality of different control targets, depending upon a pattern of control of an operating speed of said first relative-movement device.

2. An electric-component mounting system according to claim 1, wherein said first relative-movement device includes an XY robot (469) operable to move said component-holding device (460) in an XY plane defined by mutually perpendicular X and Y axes and parallel to said surface of said printed-wiring board supported by said board-supporting device.

3. An electric-component mounting system according to claim 1, wherein said first relative-movement device includes:

a turning device (142) holding a plurality of component-holding members (140) of said component-holding device and operable to turn said component-holding members about a common axis of turning, for successively moving said component-holding members to a predetermined component-mounting position; and

a board-positioning device (44) operable to move said board-holding device (40) in said first direction, for bringing a selected position on said printed-wiring board into alignment with said component-mounting position in a plane parallel to said surface of the printed-wiring board supported by said board-supporting device.

4. An electric-component mounting system characterized by comprising:

a component supply device (14) operable to supply electric components (28);

a plurality of component-holding members (140) each arranged to hold the electric component supplied from said component supply device;

a turning device (142) holding said plurality of component-holding members and operable to turn said component-holding members about a common axis of turning, for successively moving said component-holding members to a predetermined component-mounting position;

a board-supporting/positioning device (40, 44) arranged to support a printed-wiring board on which said electric components are to be mounted, and operable to move said printed-wiring board in a plane parallel to a surface (64) of the printed-wiring board, for bringing a selected position on said printed-wiring board into alignment with said component-mounting position in said plane; and

a control device (300) including a positioning portion operable to select one of a plurality of different control targets which is used for said board-supporting/positioning device to move said selected position on said printed-wiring board to said

component-mounting position, said positioning portion selecting said one of said plurality of different control targets, depending upon a pattern of control of a speed of a turning movement of each of said component-holding members to said component-mounting position by said turning device.

5. An electric-component mounting system according to claim 4, wherein said turning device (142) includes an indexing body (126) intermittently rotatable about said common axis of turning, and said positioning portion (300) of said control device selects said one of said plurality of different control targets according to at least one of a maximal value of a rotating speed of said indexing body and a deceleration value of said indexing body.

6. An electric-component mounting system according to claim 5, wherein at least one of said maximal value of the rotating speed and deceleration value of said indexing body is variable in a predetermined first number (integer $N \geq 2$) of steps, while said positioning portion (300) is operable to change the control target used to move said selected position, in a predetermined second number (integer M) of steps which is not larger than said predetermined first number.

7. An electric-component mounting system according to claim 6, wherein said predetermined second number (M) is smaller than said predetermined first number (N).

8. An electric-component mounting system according to claim 4, wherein said control device (300) includes memory means (306) for storing said plurality of different control targets in relation to respective different patterns of control of a speed at which each of said component-holding members is turned by said turning device (142) about said common axis of turning.

9. An electric-component mounting system according to claim 1, wherein said control device (300; 500) further includes

control-target determining portion operable to determine said plurality of different control targets which are selectively used to establish said predetermined relative position between said component-holding device and said board-supporting device.

10. An electric-component mounting system according to claim 4, wherein said control device (500) further includes control-target determining portion operable to determine said plurality of different control targets which are selectively used to move said selected position on said printed-wiring board to said component-mounting position.

11. An electric-component mounting system according to claim 9, wherein said control-target determining portion includes:

speed-control-pattern changing means for selecting one of a plurality of different patterns of control of a moving speed of said component-holding device (140; 460);

test-chip mounting control means for operating said component-holding device to hold said test chips (330), moving said component-holding device in each of said plurality of different patterns of control of said moving speed, and operating said component-holding device to mount said test chips at respective test-chip mounting positions predetermined on said printed-wiring board (38; 416);

an image-taking device (70; 470) operable to take images of said test chips as mounted by said test-chip mounting control means;

data processing means for processing image data representative of said images of said test chips, to obtain an amount and a direction of a positioning error of each of said test chips with respect to said test-chip mounting positions; and

control-target determining means for determining said plurality of different control targets, on the basis of the amounts and directions of the positioning errors of said test chips obtained by said data processing means.

12. An electric-component mounting system according to claim 10, wherein said control-target determining portion includes:

speed-control-pattern changing means for selecting one of a plurality of different patterns of control of the speed of the turning movement of said component-holding members (140);

test-chip mounting control means for operating said component-holding members to hold said test chips, moving said component-holding members in each of said plurality of different patterns of control of said turning speed, and operating said component-holding members to mount said test chips at respective test-chip mounting positions predetermined on said printed-wiring board (38);

an image-taking device (70) operable to take images of said test chips as mounted by said test-chip mounting control means;

data processing means for processing image data representative of said images of said test chips, to obtain an amount and a direction of a positioning error of each of said test chips with respect to said test-chip mounting positions; and

control-target determining means for determining said plurality of different control targets, on the basis of the amounts and directions of the positioning errors of said test chips obtained by said data processing means.